

ALASKA BIRTH DEFECTS MONITOR

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DIABETES IS BOTH A LEADING PUBLIC HEALTH CONCERN AND A STRONG RISK FACTOR FOR BIRTH DEFECTS

We have all seen and read the headlines about the increasing burden of diabetes in the United States, but did you know that numerous studies also show an association between maternal diabetes and a wide range of birth defects? Rates of central nervous system defects, heart defects, limb deficiencies, urogenital anomalies and orofacial clefts are all increased.

While the risk for isolated birth defects is increased approximately three times, the risk for multiple defects is increased approximately eight times over background in the offspring of women with pregestational diabetes mellitus (PGDM). Major congenital malformations are the leading cause of mortality and serious morbidity in infants of mothers of PGDM.

Because half of all pregnancies are unplanned, women need to hear about the reproductive risks of

JANUARY IS BIRTH DEFECTS PREVENTION MONTH
2010 FOCUS:

DIABETES IN WOMEN OF CHILDBEARING AGE

DIABETES ALERT SOUNDED FOR WOMEN

Although diabetes has been identified as a public health concern, the general public is unaware of the complications that uncontrolled diabetes can have on both the pregnant woman and her baby. Studies have demonstrated that the key to a healthy pregnancy for women with diabetes is keeping blood glucose in target range — both before and during pregnancy. Babies born to women with diabetes, especially women with poor diabetes control are at greater risk for birth defects.

Small steps like visiting a



All types of diabetes, not just gestational, have been linked to birth defects when the disease is not carefully controlled. The nationwide prevalence of diabetes in women of childbearing age has doubled in the last decade. Diabetes now affects 1.3 million women ages 18-44 nationally and about 3,233 women in Alaska*

(*AK BRFSS 2008 data)

health care provider before pregnancy and taking a multivitamin every day can make a big difference. The National Birth Defects Prevention Network is working with health care providers around the country to encourage diabetes prevention and control for the

over 60 million women in the US of childbearing age.

Women can take other steps in their everyday lives to maintain good health such as having regular health care check ups and learning about family history and genetic risks.

diabetes to themselves and future offspring starting at puberty. There is no threshold for hemoglobin A1C values below which risk disappears. However, women who optimize glycemic control prior to conception can lower the chance of birth defects to near the general population risk.

Rates of PGDM and gestational diabetes (GDM) increase dramatically with

Increasing maternal age and weight. Nearly 9 in 10 of these women are overweight or obese. Obesity itself increases the risk of pregnancy complications and adverse outcomes. The increasingly high rates of obesity, metabolic syndrome and gestational diabetes among women of childbearing age heighten the importance of addressing these risk factors at every health care encounter.

Did you know...

According to data from the Alaska Behavior Risk Factor Surveillance System (BRFSS), between 1996-1998 and 2006-2008, *the percentage of Alaska women of childbearing age with diabetes increased by 42%, from 1.9% to 2.7%.*

Minimizing poor birth outcomes

In addition to encouraging women with diabetes to maintain good glucose control, to minimize the risk of birth defects and other poor birth outcomes, health care providers are encouraged to remind all women who are pregnant or considering becoming pregnant to:

- Take a daily multi-vitamin that includes 400 micrograms of folic acid during the childbearing years (ages 18-44), not just during pregnancy
- Avoid tobacco use
- Avoid drinking any alcoholic beverages
- Avoid toxic substances such as cleaning solvents, insecticides and paint fumes
- Avoid infections—wash hands frequently, avoid the litter box, get immunizations
- Maintain a healthy weight

Although the causes of many birth defects are not known, many birth defects are associated with the risks indicated above. Taking some simple steps can help ensure the healthiest possible outcome.

Preconception Care, Questions and Answers:

http://www.cdc.gov/ncbddd/preconception/QandA_providers.htm

This website by the Centers for Disease Control and Prevention (CDC) about Preconception Care is for professionals working with women of childbearing age. It contains various questions and corresponding answers, recommendations for improving preconception health in addition to specific recommendations for improving pregnancy outcomes.

Selected resources...

Diabetes and Pregnancy Frequently Asked Questions: <http://www.cdc.gov/ncbddd/bd/diabetespregnancyfaqs.htm>

This is the CDC's birth defects website with webpage about diabetes and pregnancy. The site contains general information about diabetes and the related types. It also discusses diabetes during pregnancy. In addition, several sections contain useful information about prevention of problems, handling problems during pregnancy and the impact of diabetes on the baby.

Pregnancy and diabetes from conception to birth: <http://www.mayoclinic.com/health/pregnancy-and-diabetes/da00042> The website provides general consumers with information about diabetes and pregnancy.

Prevent and Control Diabetes: <http://www.cdc.gov/diabetes/pubs/pdf/prevent.pdf>

This is a guide created to help people understand diabetes with tips on how to prevent and control diabetes. (August 30, 2005).

Diabetic Moms Need a Plan Before They Conceive: <http://www.uwhealth.org/news/diabeticmomsneedaplanbeforetheyconceive/20508>

From The University of Wisconsin Hospitals and Clinics. Published June 1, 2009.

Folic Acid and Neural Tube Defect Prevention

Consuming 400 micrograms of folic acid daily before and during early pregnancy will help reduce a woman's risk for pregnancy affected by a neural tube defect. Health care professionals should encourage women who can become pregnant to consume folic acid daily through a vitamin supplement or enriched foods.



Guidelines for Reporting Gastroschisis and Omphalocele to the ABDR

Problem:

Gastroschisis and Omphalocele are often reported to the Alaska Birth Defects Registry using ICD-9 code 756.79, the same code being used to report both conditions. It is our goal to be able to distinguish between the conditions when they are reported; there are two ways this can be achieved: 1) via a narrative description of the defect on the submitted report or 2) via use of 2009 ICD-9 codes that distinguish the conditions.

The distinction between gastroschisis and omphalocele is important because they have different etiologies and different implications for treatment and long-term survival.

The ABDR requests that all reporting entities who are able to use the 2009 ICD-9 codes to report these conditions do so as follows:

756.72	Omphalocele
756.73	Gastroschisis

If reporting entities are not able to employ the specific codes, we request that you *please include a written narrative to distinguish* between the two conditions – if you are not already doing so.

Gastroschisis –

Gastroschisis is an opening present at birth in the front abdominal wall to the side of the navel through which the small intestine, part of the large intestine, and occasionally the liver and spleen, may protrude. The opening is separated from the navel by a small bridge of

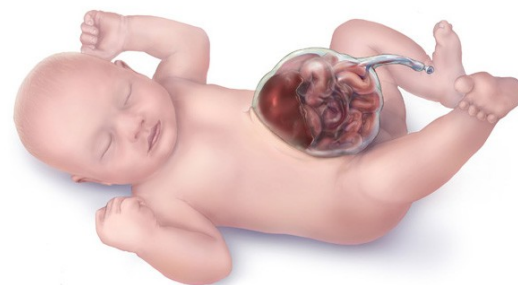


skin, and the protruding organs are not covered by a protective membrane.

Gastroschisis usually occurs on the right side of the umbilicus, although it may occur on the left. Gastroschisis is usually easily recognized on physical examination after delivery, however, it sometimes may be conclusively distinguished from omphalocele only at surgery or autopsy.

Omphalocele –

Omphalocele is a defect in the front abdominal in which the navel ring is widened, allowing protrusion of abdominal organs, including the small intestine, part of the large intestine, and occasionally the liver and spleen, into the navel. The protruding organs are covered by a nearly transparent membranous sac.



Omphalocele is usually easily recognized on physical examination after delivery, however, in some instances, it may be conclusively distinguished from gastroschisis only at surgery or autopsy.

Distinguishing the conditions:

In omphalocele, abdominal organs protrude through the navel into the umbilical cord. There is no bridge of skin between the abdominal wall defect and the navel and cord. While the protruding organs are covered by a protective membrane, this may rupture before, during, or after delivery.

In gastroschisis, the navel and cord are normal and separated from the abdominal wall defect by a small bridge of skin. The protruding organs are not covered by a protective membrane, however, they may appear matted and covered by a thick fibrous material as a result of prolonged exposure to amniotic fluid *in utero*.

Please contact Jennifer Bisson at 269-8097 if you have any questions regarding this request.

State of Alaska Department of Health and Social Services/
Division of Public Health/
Section of Women's, Children's and Family Health/
Maternal and Child Health Epidemiology Unit
<http://www.epi.alaska.gov/mchepi/ABDR/default.stm>

Sean Parnell, Governor
Bill Hogan, DHSS Commissioner
Ward B. Hurlburt, DPH Director
Stephanie Wrightsman-Birch, Section Chief



Hot off the press!

The National Birth Defects Prevention Network's Education and Outreach Committee is pleased to present the **2010 Birth Defects Prevention Month Packet**, focusing on "Diabetes in Women of Childbearing Age as a Risk Factor for Birth Defects." The packet materials are available at:

<http://www.nbdpn.org/current/resources/bdpm2010.html>.

These resources may be used during Birth Defects Prevention Month and throughout the year.

The American Diabetes Association is a great place for professionals and the public to begin to find information on diabetes. They cover all the basics and include links to more in-depth information on a variety of topics and issues.

Check them out at:
<http://www.diabetes.org/>

Contact us! If you would like more information on birth defects reporting in Alaska, a copy of our Birth Defects Surveillance Data Book, or if you would like a presentation on the prevalence and trends of birth defects for your agency or organization, please contact Sandy Collins, ABDR Coordinator.

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Resources for Women of Childbearing Age

Prevention of Birth Defects is BEFORE Pregnancy:

<http://www.ibis-birthdefects.org/start/bdpregnancy.htm>

This website contains general information on various areas of pregnancy and birth defects prevention from the International Birth Defects Information Systems.

Fact Sheet on the IHS Division of Diabetes: <http://www.ihs.gov/MedicalPrograms/Diabetes/HomeDocs/Resources/FactSheets/IHSDDTPOverview08.pdf>

This fact sheet is provided by the Indian Health Services (IHS) Division of Diabetes Treatment and Prevention website.

Resources for health care professionals, including the current Clinical Practice Recommendations are available at:

<http://professional.diabetes.org/>

To learn more about the burden of diabetes in Alaska go to:

<http://www.hss.state.ak.us/dph/chronic/diabetes/default.htm>

Check out the **Alaska Area Diabetes Program** website for additional patient resources and information: <http://www.anmc.org/services/diabetes/>

diabetes

If you have diabetes, you can lead a healthy, active life. You can also have a healthy pregnancy and healthy baby if you get your blood sugar under control before you become pregnant.

Your health is at risk if you have diabetes and get pregnant unless you carefully manage your blood sugar levels. Also there is a much higher chance that your baby will have a major birth defect or other serious health problems if your sugar levels are too high.

Diabetes is very common. Many women have it and don't know it. **Although there are often no early symptoms, watch for these signs:**

- Increased thirst and hunger
- Frequent urination
- Feeling weak, tired and irritable
- Feeling sick to your stomach, vomiting
- Having cuts and bruises that take a long time to heal
- Frequent infections of the skin, gums, vagina or bladder
- Blurry vision
- Tingling or numbness in your hands or feet.

Your chances of having diabetes are higher if:

- You are overweight
- You don't exercise regularly
- You are related to someone with diabetes
- You are African-American, Latina, Native-American, Asian-American or Asian-Indian
- You had problems with sugar levels during pregnancy.

If you have diabetes, work closely with your doctor and a dietitian or certified diabetes educator. Develop a plan to balance eating (which raises blood sugar levels) with exercise, (which lowers blood sugar levels). Maintain a healthy weight. Take medicine if your doctor prescribes it.

Keep in mind....

- **If you have diabetes and you could become pregnant:**
 - Talk with your doctor or other health care professional about the best birth control. It's important not to get pregnant until your blood sugar is under control.
- **If you have diabetes and you want to get pregnant:**
 - Visit your doctor for a pre-pregnancy check-up at least three months before you hope to get pregnant. You may have special needs early in and throughout pregnancy.
 - Talk to your provider about the best medication for you to take.
 - See your doctor before you become pregnant again if you had gestational diabetes when you were pregnant before.

The NBDPN would like to acknowledge the California Preconception Care Initiative, a collaborative project of Sutter Medical Center, Sacramento, and the California chapter of the March of Dimes, who originally created these documents and has allowed the NBDPN to modify them for the use in National Birth Defects Prevention Month. http://www.marchofdimes.com/california/4949_8238.asp

Healthy Women, Healthy Babies

You may be surprised to learn that about **50 percent** of all pregnancies in the United States are not planned. It may also be news that many birth defects and other newborn health problems occur in the first few weeks after conception—when you may not even know you're pregnant.

A baby's health is strongly linked to the mother's health before pregnancy. That's another important reason for you to stay healthy. Whether or not you're planning to get pregnant, it's important to follow these guidelines:

- Take a multi-vitamin with 400 micrograms of folic acid every day.
- Ask your doctor about your risk of diabetes.
- If you smoke, stop.
- Have a GYN exam annually.
- If you are being hurt by a partner or someone else, call a local shelter or crisis hot line. Also tell a health care worker you trust.
- Eat a variety of whole grains, fruits and vegetables every day and lower your intake of fat.

This and other fact sheets are available in English and Spanish at:
<http://www.nbdpn.org/current/resources/bdpm2010.html>